

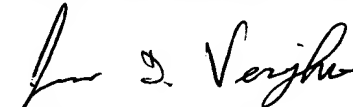
Applicants herewith submit a Declaration which is duly executed by Dr. Witschel, one of the inventors of the invention disclosed and claimed in the present application. Dr. Witschel's Declaration includes the data which were previously presented by applicants. It is further respectfully solicited that the Examiner give full and due consideration to applicants' arguments, presented in their previous reply, why the Claims of **Otten et al.** when taken in view of the disclosure of **Barton** cannot be deemed to establish that the subject matter of applicants' claims was obvious at the time the invention was made. In light of the attached and the remarks already presented by applicants in their previous reply it is therefore respectfully requested that the Examiner favorably reconsider the rejection of applicants' Claims 1 to 7, 10, 17, 22 and 23 under the judicially created doctrine of obviousness-type double patenting based on the claims of **Otten et al.** and the disclosure of **Barton**. Favorable action is solicited.

REQUEST FOR EXTENSION OF TIME:

It is respectfully requested that a two month extension of time be granted in this case. The respective \$450.00 fee is paid by credit card (Form PTO-2038 enclosed).

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees, to Deposit Account No. 14.1437. Please credit any excess fees to such deposit account.

Respectfully submitted,  
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Encl.: Dr. Witschel's Declaration dated May 30, 2005  
JDV/BAS



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:  
Witschel et al.

Serial No. 09/763,704

Filed: 02/26/01

Group/Art Unit: 1625

Examiner: Celia C. Chang

For : Cyclohexenonquinolinoyl-derivatives as herbicidal agents

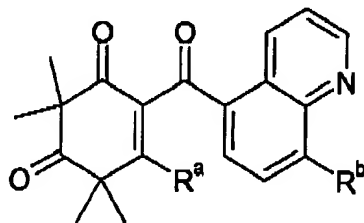
DECLARATION

1. I, Matthias Christan Witschel, Dr. rer. nat., a citizen of the Federal Republic of Germany, hereby declare as follows:

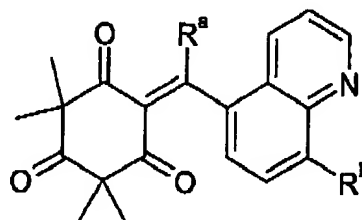
I am a fully trained chemist having studied biology at the University of Erlangen, Nürnberg, Germany, from 1985 to 1994. I received the doctorate (PhD) by said university in 1994. From 1994 to 1995 I did postdoctoral research at Stanford University. I joined BASF Aktiengesellschaft of 67056 Ludwigshafen, Germany in 1996, and have since then been working in the field of herbicides, and am therefore fully conversant with the prior art.

I am one of the inventors of the subject-matter disclosed and claimed in Appl. Ser. No. 09/763,704 and I am therefore familiar therewith.

2. I have read and fully understood the Office Action of February 1 2005 and the references cited therein by the Examiner and conceived the comparative tests described below.
3. The following compounds 1 to 11 of the general formulae Ia and Ib were tested with respect to their herbicidal activity. The meanings of the radicals  $R^a$  and  $R^b$  are given in table 1.




(Ia)



(Ib)

Table 1:

Compound No.	Formula	R <sup>a</sup>	R <sup>b</sup>	Example Nr.
1	1a	Cl	F	2.23
2 (comp)	1a	OH	F	12.03 of US 6479436
3	1a	O-C(O)-SCH <sub>3</sub>	F	2.17
4	1a	F	Cl	2.57
5 (comp)	1a	OH	Cl	12.05 of US 6479436
6	1b	Cl	Cl	3.1
7	1b	S-C(O)-N(CH <sub>3</sub> ) <sub>2</sub>	Cl	3.4
8	1b		Cl	3.5
9	1a	OCH <sub>3</sub>	CH <sub>3</sub>	2.18
10 (comp)	1a	OH	CH <sub>3</sub>	12.01 of US 6479436
11	1b	1,2,4-triazin-4-yl	CH <sub>3</sub>	3.2

comp = comparative compound

The tests were performed as a post-emergent treatment as described on page 89 of the application (greenhouse experiments):

Test plants were grown in plastic pots of approximately 12.5 cm in diameter in a substrate provided with sufficient nutrients and water to a height of 3 to 15 cm, depending on the growth habit. The plants were then treated with aqueous spray containing the active ingredient. The rate of application were 0.500, 0.250, 0.125, 0.0624, 0.0312 or 0.0156 or 0.0078 kg/ha of active substance.

Depending on the species the plants were kept at 10-25°C or 20-35°C for 2 to 4 weeks. During the test period, the plants were tended, and their response to the individual treatments was evaluated. Evaluation was carried out using a scale from 0 to 100. 100 means complete (100 %) destruction of at least the above-ground parts of the plants and 0 means no damage or normal course of growth. The results obtained are given in tables 2 to 9.

Table 2:

Application rate [kg/ha]	Compound 1		Comparative Compound 2	
	0.0312	0.0156	0.0312	0.0156
Test plants				
Echinochloa cruss galli	85	85	85	70
Galium aparine	85	80	80	75
Polygonum per- sicaria	98	98	70	60
Setaria faberi	80	80	60	40

Table 3:

	Compound 4		Comparative Compound 5	
Application rate [kg/ha]	0.0625	0.0312	0.0625	0.0312
Test plants				
Zea mays	0	0	50	40
Abuthilon theoprasti	100	95	80	80
Brachiaria plan- taginea	95	95	85	80
Echinocloa cruss galli	100	95	80	75
Galium aparine	98	98	75	60
Ipomoea spp.	95	90	80	75

Table 4:

	Compound 9		Comparative Compound 10	
Application rate [kg/ha]	0.0625	0.0312	0.0625	0.0312
Test plants				
Triticum aestivum	0	0	20	15
Chenopodium al- bum	90	90	80	75
Galium aparine	95	90	85	75
Sinapsis alba	95	85	80	75

Table 5:

	Compound 3		Comparative Compound 2	
Application rate [kg/ha]	0.125	0.0625	0.125	0.0625
Test plants				
Amaranthus ret- roflexus	98	85	90	75
Echinocloa cruss galli	100	90	75	65
Panicum mili- aceum	95	95	95	80

Table 6:

	Compound 6		Comparative Compound 5	
Application rate [kg/ha]	0.0625	0.0312	0.0625	0.0312
Test plants				
Chenopodium al- bum	95	95	95	85
Gallium aparine	98	95	75	60
Polygonum per- sica	95	90	90	85
Sinapsis alba	98	95	90	85

Table 7:

	Compound 6		Comparative Compound 5	
Application rate [kg/ha]	0.500	0.250	0.500	0.250
Test plants				
Alopecurus myo- soides	98	98	90	90
Amaranthus re- troflexus	100	100	90	80
Avena fatua	95	90	95	80

Table 8:

	Compound 11		Comparative Compound 10	
Application rate [kg/ha]	0.125	0.0625	0.125	0.0625
Test plants				
Chenopodium al- bum	98	95	95	80
Echinochloa crus- galli	95	95	95	90
Gallium aparine	95	95	90	85
Ipomoea spp.	95	90	90	80
Sinapsis alba	95	85	95	75

Table 9:

Application rate [kg/ha]	Compound 8		Comparative Compound 5	
	0.250	0.125	0.250	0.125
Test plants				
Abuthilon theoprasti	98	98	85	85
Alopecurus myosuroides	100	100	85	85
Amaranthus retroflexus	95	85	65	50
Echinocloa crus galli	100	100	90	85
Galium aparine	100	100	75	75

Table 10:

Scientific Name	common name
Abuthilon theoprasti	velvetleaf
Alopecurus myosuroides	foxtail
Amaranthus retroflexus	pigweed
Avena fatua	Wild oat
Brachiaria plantaginea	Alexander grass
Chenopodium album	Lambsquarter
Echinocloa crus galli	Barnyard grass
Galium aparine	Catchweed
Ipomoea spp.	Morning glory
Panicum miliaceum	Millet common
Polygonum persicaria	Ladysthumb
Setaria faberi	Foxtail giant
Sinapsis alba	White mustard
Triticum aestivum	Winter wheat
Zea mays	Corn

The data presented in tables 2 to 9 demonstrate that replacing the hydroxyl group in compounds of prior art US 6,479,436 by halogen like fluoro or chloro, by methoxy, methylthiocarbonyloxy, dimethylaminocarbonylthio or by N-bound heterocycles such as 1,2,4-triazol-1-yl or 4-oxo-1,4-dihydropyridin-1-yl lead to an increased herbicidal activity, in particular at lower application rates. The data in tables 2 and 3 demonstrate an increased tolerance by crop plants.

4. The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine of imprisonment or both, under section 1001 of title 18 of the U.S. code and that such willful false statements may jeopardize the validity of the above-identified application or patent issuing thereon.

Ludwigshafen, 30.5.05

Matthias Lohmeyer